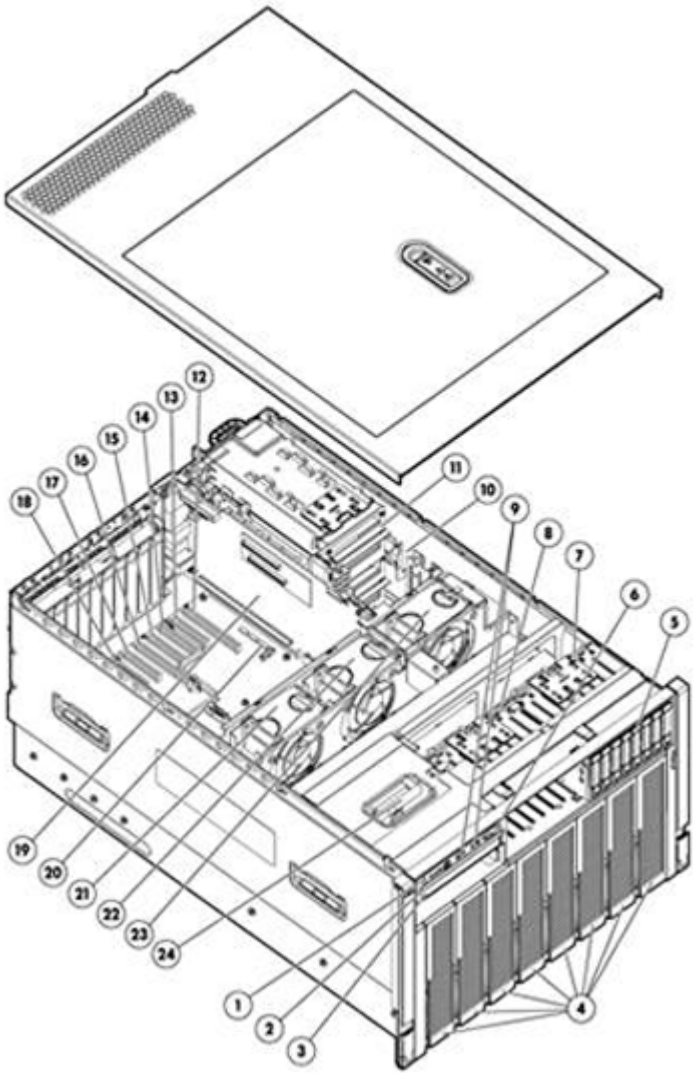
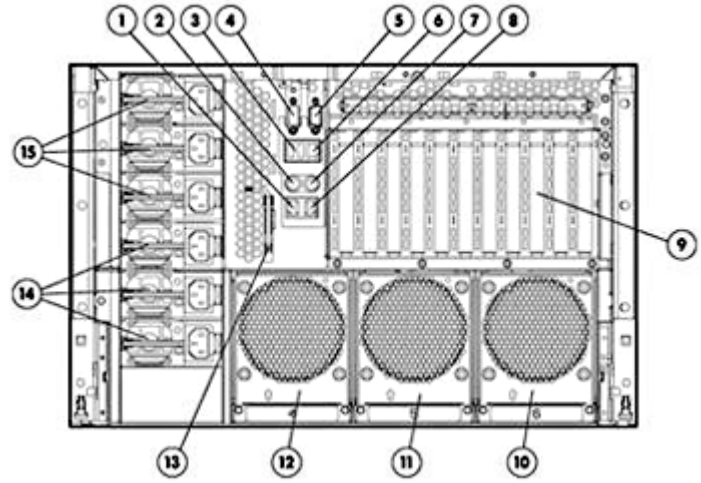
Overview





Front View:

1. Front Panel LED display (internal and external health, Unit ID button & LED, NIC LED and Power Button
2. System Insight Display (SID)
3. Slimline Media Bay
4. Processor Memory Cells (1 - 8)
5. Eight bay Small Form Factor (SFF) Serial Attached SCSI (SAS) drive cage
6. Video Connector
7. SAS backplane (Standard)
8. SAS backplane (Optional)
9. USB Connectors

Rear View:

1. NIC connector 1
2. Keyboard connector
3. USB connector
4. Video connector
5. Serial connector
6. Integrated Lights-Out 2 (iLO2) connector
7. Mouse connector
8. NIC connector 2
9. PCI Express expansion slots
10. Fan 6
11. Fan 5

10. BBWC Battery Pack
11. Power Supply Backplane
12. PCI-Express x8 non-hot-plug expansion slot 1
13. PCI-Express x4 non-hot-plug expansion slot 2
14. PCI-Express x4 non-hot-plug expansion slot 3
15. PCI-Express x4 non-hot-plug expansion slot 4
16. PCI-Express x16 non-hot-plug expansion slot 5
17. PCI-Express x4 non-hot-plug expansion slot 6
18. PCI-Express x4 non-hot-plug expansion slot 7
19. Serial Peripheral Interface (SPI) Board
20. System Maintenance Switch
21. Fan 1
22. Fan 2
23. Fan 3

Not shown: PCI-Express expansion slots 8 - 11

12. Fan 4
13. T-15 Torx screwdriver
14. Redundant power supply 4 - 6 (optional)
15. Power supply 1 - 3

At A Glance

The HP ProLiant DL785 G5, the newest and most expandable addition to the award winning HP ProLiant line, is an 8-socket x86 server, supporting up to 8 AMD Opteron™ Quad-Core processors, 256 GB of memory and 11 PCI-e I/O slots. With this highly scalable feature set the DL785 G5, is an ideal choice for the growing enterprise class database, consolidation and virtualization environments seeking to improve server utilization and reduce server sprawl, while continuing to leverage all the familiar and easy to use ProLiant management tools and options.

- Processors:
  - Supports up to 8 Quad-Core AMD 8300 Series Processors
- Memory:
  - Up to 256 GB of memory, supported by 64 slots of PC2-5300 Registered DIMMs
- Storage Controller:
  - HP Smart Array P400i Controller
  - Optional 256MB and 512MB battery backed write cache
- Internal Drive Support:
  - Support for up to 8 hot plug SFF SAS drives, standard
  - Optional SAS Option Kit available to support an additional 8 hot plug SFF SAS drives, for a total of 16 internal drives
  - Optional Slimline DVD/CD-RW drives
- Network Controller:
  - Two embedded NC371i Multifunction Gigabit Network Adapters with TCP/IP Offload Engine, including support for Accelerated iSCSI through an optional Licensing Kit
- Expansion Slots:
  - 11 total slots: (3) x16 PCI-Express; (3) x8 PCI-Express; (5) x4 PCI-Express
- Video Ports:
  - One front and one rear video ports
- USB Ports:
  - (5) Total USB 2.0 Ports: (2) front; (2) rear; (1) internal
- Redundancy:
  - Redundant hot plug power supplies and fans
- Management:
  - Integrated Lights-Out 2 featuring Integrated Remote Console with KVM over IP performance over shared network

access
- Innovative diagnostic lighting (System Insight Display) for rapid response to service events

- Form Factor:
  - Delivering maximum performance in a versatile, rack optimized form factor
- Deployment/Serviceability:
  - Tool-less and virtually cable-less internal design
  - Rapid Deployment racking solution (rack rails and cable management)
- Warranty:
  This product is covered by a global limited warranty and supported by HP Services and a worldwide network of HP Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HP Care Pack services or customized service agreements. SATA hard drives have a one-year warranty.
  NOTE: Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.
  Additional information regarding worldwide limited warranty and technical support is available at:
  http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html

Standard Features

NOTE: For a brief, printer friendly data sheet that describes this product and informs you of the essential capabilities and specifications, please visit: http://h71028.www7.hp.com/ERC/downloads/4AA1-8173ENW.pdf.

Processor Four or eight of the following depending on Model	AMD Opteron™ Processor 8354, Quad-Core (2.20 GHz, 75 Watts) AMD Opteron™ Processor 8356, Quad-Core (2.30 GHz, 75 Watts) NOTE: 4 or 8 supported.
Cache Memory	Shared 2MB L3 cache
Upgradeability	Supports up to 8 processors
Chipset	ServerWorks HT2100 and HT1000
Memory Protection & Functionality	Advanced ECC

Memory

Type	PC2-5300 Registered DIMMs
Standard	8 GB (8 x 1 GB)
One of the following depending on Model	16 GB (16 x 1 GB)
Maximum	256 GB (64 x 4 GB)

Network Controller

Two embedded NC371i Multifunction Gigabit Network Adapters with TCP/IP Offload Engine, including support for Accelerated iSCSI through an optional Licensing Kit

Expansion Slots

Expansion Slots	Technology	Bus Width**	Connector Width	Bus Number*	Device No.**	Form Factor	Notes
1	PCIe	x8	x16	04h	0	Full-size	
2	PCIe	x4	x8	07h	0	Full-size	
3	PCIe	x4	x8	0Ah	0	Full-size	
4	PCIe	x4	x8	0Dh	0	Full-size	
5	PCIe	x16	x16	41h	0	Full-size	
6	PCIe	x4	x8	44h	0	Full-size	
7	PCIe	x4	x8	47h	0	Full-size	
8	PCIe	x16	x16	81h	0	Full-size	
9	PCIe	x8	x16	84h	0	Full-size	
10	PCIe	x16	x16	C1h	0	Full-size	
11	PCIe	x8	x16	C4h	0	Full-size	

* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus

assignment number
** Indicates the number of physical electrical lanes running to the connector
NOTE: All slots are non-hot-plug Default bus assignment. Inserting cards with PCI bridges may alter the actual bus assignment number. Slots are enumerated differently based on the operating system. Microsoft operating systems enumerate from lowest to highest Device ID by bus (starting with the lowest bus).

Manageability	Integrated Lights-Out 2 (iLO 2) Standard Management (ASIC on the System Board)		
Storage Controllers	HP Smart Array P400i Controller		
Storage Data Protection	The Battery-Backed Write Cache (BBWC) Enabler for the Smart Array P400i Controller protects up to 512-MB write cache memory from hard boot, power, controller, or system board failures. • Optional on all HP ProLiant DL785 G5 Models • Battery charge/life: Up to 72 hours/3 years • Transportable data protection • Increases overall controller performance NOTE: Safely transport your write cache data to another HP ProLiant DL785 G5 in the data center by removing the BBWC Enabler and Smart Array P400i Controller Memory Module simultaneously (connected by short cable).		
Storage	Optical Drive	Slimline DVD/CD-RW Drive Standard on all models - ejectable for security and serviceability	
	Hard Drives	None ship standard	
	Hard Disk Drive Backplane	Standard: Internal SAS backplane supports up to eight SFF hard disk drives Optional: Adding the optional SAS Option Kit enables the second SAS backplane to support an additional eight SFF hard disk drives	
Maximum Internal Storage Type	Hot Plug SAS	2.336TB	16 x 146GB SFF SAS drives
Interfaces	Serial	1	
	Pointing Device (Mouse)	1	
	Video	1 front, 1 rear	
	Keyboard	1	
	USB 2.0 Ports	2 front, 2 rear, 1 internal	
	iLO 2 Remote Management	1	
	Network RJ-45	2	

Standard Features

Graphics	Integrated ATI-RN50 with 32MB DDR memory
Form Factor	Rack (7U = 12.25 inches), ships with sliding rails and cable management system Space saving form factor (7U) provides space efficiencies while providing maximum deployment flexibility
HP Insight Control Management Suites	HP Insight Control Environment delivers foundation management, including remote monitoring, hardware resource deployment, health monitoring, software version control, performance monitoring, vulnerability scanning and patch management, and power management. HP Insight Control Environment installs and licenses the following components by default using a wizard-based integrated installer: • HP Systems Insight Manager • HP iLO Advanced Pack • HP Insight Power Manager • HP Performance Management Pack • HP Vulnerability and Patch Management Pack Additional ProLiant Essentials software and management tools included on the Insight Control Management kit can be installed manually • HP Server Migration Pack - Universal Edition • HP Open Service Event Manager • HP Instant Support Enterprise Edition NOTE: Server Migration Pack - Universal Edition can be installed from the SMP Universal CD included in the Insight Control Management media kit. NOTE: For additional product and licensing information about HP Insight Control Environment, visit: http://www.hp.com/go/ice. HP Insight Control management suites and most HP ProLiant Essentials include a one year of 24 x 7 HP Software Technical Support and Update Service ensuring rapid access to HP support staff and proactive delivery of software updates. For more information about this service, please visit: http://www.hp.com/services/insight.

Standard Features

Server Management Stand Alone Software Product - ProLiant Essentials	HP Systems Insight Manager	HP Systems Insight Manager (HP SIM) provides a unified, secure and extensible standards-based environment to centrally manage servers, storage and other infrastructure devices, (both HP and non-HP) across multiple operating system platforms.
	ProLiant Essentials Rapid Deployment Pack	Rapid Deployment Pack (RDP) extends HP Systems Insight Manager with a complete deployment solution for HP ProLiant servers. RDP provides a central location to configure server hardware, deploy Windows, Linux and VMware ESX operating environments and install HP ProLiant Support Pack drivers using images and scripted profiles. For more information, visit: http://www.hp.com/go/rdp.
	ProLiant Essentials Server Migration Pack - Universal Edition	Upgrading, replacing, or virtualizing your existing server? Effortlessly transition to new virtual or physical HP ProLiant servers or BladeSystem with automated, accurate and affordable migration of OS, application and data. SMP Universal automates the manual processes required for migrating servers between physical or virtual platforms, whether migrating to VMware or Microsoft virtual machines. SMP Universal allows all of the following migrations: ○ physical to ProLiant ○ physical to virtual ○ virtual to virtual ○ virtual to ProLiant NOTE: For more information, visit: http://www.hp.com/go/migrate.
	ProLiant Essentials Performance Management Pack	Performance Management Pack (offered exclusively through the Insight Control suites) - a performance management solution that identifies and explains hardware performance bottlenecks on ProLiant servers and attached options enabling users to better utilize their valuable resources
	Integrated Lights-Out Advanced Pack	Upgrades the iLO 2 processor with comprehensive remote control including Virtual KVM remote graphical console, enhanced console sharing and replay, virtual media (floppy, CD/DVD, USB key), virtual folders, and enterprise security (directory services and two-factor authentication).

NOTE: Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to: http://www.hp.com/servers/proliantessentials or the various ProLiant Essentials Value Pack product QuickSpecs for more information.

Standard Features

Core Infrastructure Management	SmartStart	SmartStart is a tool that simplifies server setup, providing a rapid way to deploy reliable and consistent server configurations. For more information, please visit the SmartStart Web site at: http://www.hp.com/servers/smartstart. SmartStart version supported (minimum): SmartStart 8.0
	Insight Management Agents	The Insight Management Agents should be installed on all HP servers to present system instrumentation, health and configuration information into HP Systems Insight Manager and the HP System Management Homepage. The HP System Management Homepage aggregates systems data from Insight Management Agents and other HP management tools, providing a consolidated browser-based interface for managing individual servers. Insight Management Agents and The HP System Management Homepage are included on ProLiant Support Packs, and can also be installed using the server profiles provided with the ProLiant Essentials Rapid Deployment Pack For additional information about the Management Agents and the HP System Management Homepage please visit the management Web site at: http://www.hp.com/servers/manage.
	Subscriber's Choice	Subscriber's Choice Driver and Support Alerts/Notifications is a web-based email subscription service that provides software and driver change notifications for ProLiant products. Sign up at: http://www.hp.com/go/subscriberschoice and customize your profile to receive various new alerts as they become available, on a weekly or monthly basis.
	ProLiant Support Packs and ROMPaq, software	The latest software, drivers, and firmware fully optimized and tested for your ProLiant server and options, available through ProLiant Support Packs the ProLiant Essentials Rapid Deployment Pack, SmartStart or downloaded from software and drivers download pages website at: http://www.hp.com/go/support.

HP Serviceguard for Linux (SGLX)

HP Serviceguard for Linux is a high availability clustering solution designed to protect applications and services from a wide variety of software and hardware failures, monitoring the health of each server (node) and quickly responding to failures such as those that affect system processes, system memory, LAN media and adapters, and application processes.

The following is a quick summary of HP Serviceguard for Linux features and support. For the most recent list of Linux distributions & kernels, servers and storage supported with Serviceguard for Linux, see the Serviceguard for Linux Certification Matrix, available at: http://www.hp.com/go/sglx/info.

- Supported Linux Distributions:
  - Red Hat EL 4
  - Red Hat EL 5
  - SUSE SLES10
- Supported Server Platforms
  - HP Integrity
  - HP ProLiant
  - Selected 3rd party x86 class servers
- Physical and virtual server support
- Application Integration Toolkits

- Oracle Single Instance Database
- Serviceguard Extension for SAP for Linux (SGeSAP/LX)
- Other Application Integration Toolkits for sendmail, MySQL and more are free to download at: http://www.hp.com/go/softwaredepot/ha

- Disaster Tolerant Solutions
  - Serviceguard for Linux Extended Distance Cluster (XDC) extends cluster distances up to 100 km, utilizes software RAID mirroring for data replication and is storage array independent
  - HP StorageWorks XP/EVA Cluster Extension Software for Linux (CLX) works seamlessly with HP Serviceguard for Linux, HP StorageWorks Continuous Access, and HP Disk Arrays to automate failover and failback between sites
- Software updates are distributed by HP Services to customers with support contracts

NOTE: For additional information on HP Serviceguard for Linux, visit: http://www.hp.com/go/sglx or see the HP Serviceguard for Linux QuickSpecs.
NOTE: HP Serviceguard for Linux products for HP ProLiant and select 3rd party x86 class servers include one year of 24 x 7 HP Software Technical Support and Update Service ensuring rapid access to HP support staff and proactive delivery of software updates. For more information about this service, please visit: http://www.hp.com/services/swsupport.

Industry Standard Compliance

ACPI 1.0a. Compliant
PCI 2.2 Compliant
PXE Support
WOL Support (with embedded NC371i Multifunction Gigabit Network Adapters)
Physical Address Extension (PAE) Support
Microsoft® Logo certifications
USB 2.0 Support

Remote Management

Integrated Lights-Out 2 (iLO 2) Standard Management

- Virtual Text Remote Console (pre OS-only)
- Remote Serial Console
- Virtual Power Button Control
- Virtual Unit ID control
- Integrated Remote Console (ActiveX Control client)
- Dedicated & full function shared network connectivity with VLAN
- Embedded system health
- Browser, command line and scripted access
- Automatic IP Configuration via DHCP/DNS/WINS
- Industry Standard 128-bit Secure Sockets Layer (SSL) and Secure Shell security (SSH)
- Advanced Encryption Standard (AES) / Triple Data Encryption Standard (3DES)
- OS independent hardware health status
- IML and iLO Event Logging
- Support for 12 user accounts with customizable access privilege

Standard Features

Intelligent Manageability

HP Systems Insight Manager
SmartStart
Redundant ROM
Remote Flash ROM
Management Agents
Integrated Management Log (IML)
Automatic Server Recovery-2 (ASR-2)
ROM-Based Setup Utility (RBSU)
Dynamic Sector Repairing (with Smart Array Controllers)
Drive Parameter Tracking (with Smart Array Controllers)
Pre-Failure Warranty (covers processors, SAS hard drives and memory)
Redundant/adaptive load balancing NIC Support

Availability

- The Battery Backed Write Cache (BBWC) Enabler for the Smart Array P400i Controller protects up to 512MB write back cache memory from hard boot, power, controller, or system board failure. Optional on the AH261A, standard on all other HP ProLiant DL785 G5 models,
- Up to eight hot-plug SFF SAS Hard Drives (standard)
- Hot-Plug Redundant Power Supplies
- Hot-Plug Redundant Fans (standard)

Fans are N+1 hot plug redundant and individually removable.

Serviceability

- System Insight Display - precisely depicts all major subsystems of the server (PCI I/O, Memory, CPU, Redundant Cooling, Interlock, Thermtrip) and gives instant visual indication of fault status. Located on top front of server, beneath lid.
- Tool-less, virtually cable-less interior design
  - Tool-less access to interior of server
  - Ejectable, slimline Media Bay media drives (DVD/CD-RW) removable without the use of tools
  - Front accessible processors and memory
  - PCI Card Guides locks full length PCI cards in place during transit
  - Six individually removable fans
  - Tool-less removal of system board
- Quick Deploy Rails
- Tool-less design "snap in" rail

Security

Power-on password
Keyboard password
External USB port enable/disable
Network Server Mode
Serial interface control
Administrator's password
Removable Diskette drive (optional)
Removable optical drive

Standard Features

Power Supply	910W (low line), 1300W (high line) with 12V main output. Size is 2.8"(H) X 4.9"(W) X 7.5"(L). NOTE: Three Hot Plug Power Supplies ship standard with the 2.2GHz and 2.3GHz models. Three optional power supplies may be added for redundancy. NOTE: Six Hot Plug Power Supplies ship standard with the 2.4GHz and 2.5GHz models (the 4th, 5th and 6th power supplies are for redundancy.	
UPS and PDU Power Cord Matrix	Please see the UPS and PDU cable matrix that lists cable descriptions, requirements, and specifications for UPS and PDU units: http://h18004.www1.hp.com/products/servers/proliantstorage/power-protection/index.html.	
Server Power Cords	NOTE: The HP ProLiant DL785 G5 servers ship standard worldwide with a 6-foot IEC 320-C14 to IEC320-C13 jumper cord. If you require a local power cord, please check the Power Specifications below for the appropriate country-specific power cord, or consult the Power Cord Matrix: http://www.hp.com/go/powercordmatrix.	
System Fans	Standard	6 Hot plug, redundant fans (individually removable)
	Maximum	6 Hot plug, redundant fans (individually removable)
Required Cabling	For required cabling information, refer to the HP Web site at: www.hp.com/servers/dl785	
OS Support	Microsoft Windows Server 2003 Microsoft Windows Server 2008 Red Hat Enterprise Linux SUSE Linux Enterprise Server Sun Solaris VMware Virtualization Software NOTE: For a more complete and up-to-date listing of supported OSs and versions, please visit our OS Support Matrix at: http://www.hp.com/go/supportos. NOTE: For an up-to-date listing of the latest software and drivers available for your server, please select your server: http://h20000.www2.hp.com/bizsupport/TechSupport/Product.jsp?lang=en&cc=us&taskId=135&prodTypeId=15351&prodCatId=241435. NOTE: For more Linux OS support & certification information, please visit our the ProLiant & BladeSystem Server Linux matrix at: http://h18004.www1.hp.com/products/servers/linux/hpLinuxcert.html NOTE: For more information on HP's Certified and Supported ProLiant Servers, please visit the VMware Server Support Matrix at: http://h18004.www1.hp.com/products/servers/software/vmware/hpvmwarecert.html NOTE: For more complete and up-to-date information on how to buy server operating systems from HP please visit the OS product site at: http://h18004.www1.hp.com/products/servers/software/OEM.html	

Standard Features

Rack Airflow Requirements

Rack 10000 series Cabinets

The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. The 10000 Series Racks provide enhanced airflow for maximum cooling, allowing these racks to be fully loaded with servers using the latest processors.

CAUTION: If a third-party rack is used, observe the following additional requirements to ensure adequate airflow and to prevent damage to the equipment:

- Front and rear doors: If your 42U server rack includes closing front and rear doors, you must allow 5,350 sq cm (830 square inches) of hole evenly distributed from top to bottom to permit adequate airflow (equivalent to the required 64 percent open area for ventilation).
- Side: The clearance between the installed rack component and the side panels of the rack must be a minimum of 7 cm (2.75 inches).

CAUTION: Always use blanking panels to fill all remaining empty front panel U-spaces in the rack. This arrangement ensures proper airflow. Using a rack without blanking panels results in improper cooling that can lead to thermal damage.

NOTE: For additional information, refer to the Setup and Installation Guide or the Documentation CD provided with the server, or to the server documentation located in the Support section at the following URL: www.hp.com/servers/dl785.

Rack Mounting Requirements

HP ProLiant DL785 G5 rack models provide tool-free support for racks with square or round mounting holes (including Compaq/HP 7000, 9000, 10000, HP/E series, H9 series and third party racks) with an adjustment range from 24" - 36" in depth. The ambidextrous cable management arm can be mounted on either the left or right side for improved cable management.

HP ProLiant DL785 G5 in Telco Racks Support for all 2-post Telco racks requires the use of the standard rack kit and an additional option kit from Rack Solutions (http://www.racksolutions.com/hp/)

Factory Express Portfolio for Servers and Storage

HP Factory Express offers configuration, customization, integration and deployment services for HP servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed.

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HP products supported through Factory Express include a wide array of servers and storage: HP Integrity, HP ProLiant, HP ProLiant Server Blades, HP BladeSystem, HP 9000 servers as well as the MSA1000, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches.

For more information on Factory Express services for your specific server model, please contact your sales representative or go to: http://www.hp.com/go/factory-express.

HP Enterprise Configurator

The HP eCo-Enterprise Configurator now provides factory default racking for our HP hardware portfolio. This approach is aligned with our strategic direction to meet the needs and expectations of our valued customers. If you require "custom" rack configuration, please contact HP's Customer Business Center or an Authorized Partner for assistance.

Standard Features

Service and Support

HP Care Pack services provide total care and support expertise with committed response designed to meet your IT and business needs.

HP Care Pack services include coverage for the HP branded hardware options qualified for the server and purchased at the same time or afterward that are internal to the enclosure. This also includes the 22" and smaller external monitors and tower UPS options up to 3kVA. These items will be covered at the same service level and for the same coverage period as the server. Coverage of UPS Battery is not included, and standard warranty terms & conditions apply. For servers or storage systems installed within a rack, service also covers all HP qualified rack options installed within the same rack.

To fully capitalizing on your HP ProLiant servers' capabilities requires a service partner who thoroughly understands your server technology and systems environment. HP Services, an industry leader in provision of multi vender support solutions, provides a range of support services designed to meet the varying needs of your business. Whether an SMB, or large global corporation, HP has a ProLiant server support offer to help you speedily deploy and maximize system uptime.

Recommended Service - simplify ProLiant solution implementation, maintenance, and management.

- Support: 3-Year 4-Hour response 24x7 Same Business Day Coverage only
- Deployment Service: Installation and Start up only

Enhanced Service - optimize service level to increase IT performance and availability.

- Support: 3-Year Support Plus 24 only

Refer to the information on "Installation & Start-Up" for service on ProLiant server and Microsoft or Linux O/S per the Customer Description and/or Data Sheet; to be delivered on a scheduled basis 8am-5pm, M-F, excluding HP holidays.

NOTE: For a complete listing of service offerings and information visit:
http://www.hp.com/services/proliantservices
http://www.hp.com/go/proliant/carepack

Solutions

The very scalable 8-socket x86 ProLiant DL785 G5, with Quad-Core processing power, delivers outstanding flexibility, scalability and performance for customers growing Enterprise class database, consolidation and virtualization environments. Specifically, the HP ProLiant DL785 G5 would be excellent for running the following types of applications:

Typical Usage:

- High Performance Computing (HPC)
- Electronic Design Automation (EDA)/Semiconductor
- Financial
- Large database applications
- ERP / CRM
- Petrochemical
- Life Science and Material Science
- Video Rendering

Models

DL785G5 O2.2GHz-2MB, 8GB, 75W (4P Quad-Core) AH261A	Processor(s)	(4) AMD Opteron™ Processor 8354, Quad-Core (2.20 GHz, 75 Watts)
	Cache Memory	2MB Integrated Level 2 Cache
	Memory	8 GB of PC2-5300 DDR SDRAM (Standard) to 256 GB
	Network Controller	Two embedded NC371i Multifunction Gigabit Network Adapters
	Storage Controller	HP Smart Array P400i/256MB Controller
	Manageability	Integrated Lights-Out 2 (iLO 2) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	2.336TB max
	Power Supply	Three 910W/1300W Power Supplies standard
	Optical Drive	Slimline CD-RW/DVD-ROM 24x Combo Drive
	Form Factor	Rack 7U

DL785G5 O2.3GHz-2MB, 16GB, 75W (4P Quad-Core) AH260A	Processor(s)	(4) AMD Opteron™ Processor 8356, Quad-Core (2.30 GHz, 75 Watts)
	Cache Memory	2MB Integrated Level 2 Cache
	Memory	16 GB of PC2-5300 DDR SDRAM (Standard) to 256 GB
	Network Controller	Two embedded NC371i Multifunction Gigabit Network Adapters
	Storage Controller	HP Smart Array P400i/512MB BBWC Controller
	Manageability	Integrated Lights-Out 2 (iLO 2) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	2.336TB max
	Power Supply	Three 910W/1300W Power Supplies standard
	Optical Drive	Slimline CD-RW/DVD-ROM 24x Combo Drive
	Form Factor	Rack 7U

NOTE: This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for information on CTO product offerings and requirements.
NOTE: HP does not allow factory integration of options into standard models listed above. Configure-to-order servers must start with a CTO Chassis.
NOTE: This product offering does not support HP Factory Express Server Configuration Level 1.
NOTE: FIO indicates that this option only available as a Factory Installable Option.

Step 1: Base Configuration

Models	HP ProLiant DL785 G5 Rack CTO Chassis	AH233A
	Factory Integrated Models ship with:	
	Two embedded NC371i Multifunction Gigabit Network Adapters HP Smart Array P400i Controller Integrated Lights-Out 2 (iLO 2) Standard management Six (6) Redundant Hot Plug Fans Three Hot Plug Power Supply Rack 7U Form Factor	

Step 2: Choose Required Options (only one of the following from each list unless otherwise noted)

Processors	AMD Opteron™ 8354 2.2 GHz-2 MB Quad-Core Processor (75W) 4P Option Kit NOTE: If eight processors are desired, select one 468121-L21 and one 468121-B21.	468121-L21
	AMD Opteron™ 8356 2.3 GHz-2 MB Quad-Core Processor (75W) 4P Option Kit NOTE: If eight processors are desired, select one 468120-L21 and one 468120-B21.	468120-L21
Base Memory	8 GB REG PC2-5300 (2 x 4 GB) Kit, dual rank	408854-B21
	4 GB PC2-5300 DDR2 (2 x 2 GB) Kit, dual rank	408853-B21
	2 GB PC2-5300 DDR2 (2 x 1 GB) Kit, single rank	408851-B21
	NOTE: A minimum of two DIMMs (1 kit) must be installed per processor. NOTE: Memory must be ordered in like-pairs, i.e. two of the same size. NOTE: If all four banks on a memory node are populated, the maximum memory clock speed will be 533 MHz. If two or fewer banks on a memory node are populated, the maximum memory clock speed will be 667 MHz.	
Storage Controllers Upgrade Options	HP Smart Array P400 256MB FIO Cache NOTE: Supports Smart Array P400 Controller and Smart Array P400i Controller only.	405139-B21
	512MB Battery-backed write cache upgrade	405148-B21

Optical Drives	NOTE: Optical drives are ejectable.	
	Slimline CD-RW/DVD-ROM 24X Combo Drive Option Kit	331903-B21
	Slimline DVD-ROM Drive (8X/24X) Option Kit (Servers)	264007-B21
	HP DVD±R/RW 8X Slim	383975-B21

Step 3: Choose Additional Options for Factory Integration

NOTE: Select from "Options" section below.

NOTE: Some options may not be factory integratable. Please contact your local sales representative for additional information.

HP ProLiant DL785 G5 Unique Options	AMD Opteron™ 8354 2.20 GHz, Quad-Core Processor (75W) 4P Option Kit	468121-B21
	AMD Opteron™ 8356 2.30 GHz, Quad-Core Processor (75W) 4P Option Kit	468120-B21

HP Insight Control Management Suites

NOTE: Electronic licensing options are available for Insight Control suites software products. Please see the appropriate Insight Control QuickSpecs for additional information.

HP Insight Control Environment

HP Insight Control Environment, No Media 1-Server License including 1 year of 24x7 Technical Support and Updates NOTE: This part number can be purchased as a single license or as multiple licenses with a single activation key. Customer will receive a license entitlement certificate via e-mail. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service. Only available directly from HP and select resellers in the Americas region.	452148-B22
HP Insight Control Management Software Media Kit NOTE: Insight Control Management DVD media without licenses. Contains Insight Manager and Essentials software products and components licensed by Insight Control Management suites. Uses an integrated installer to perform quick and accurate software installation and updates.	436222-B21

NOTE: For additional License Kits, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12631_div/12631_div.html

HP Insight Control Environment for Linux

HP Insight Control Environment for Linux v2.0, Media pack (CD) - No licenses included NOTE: This optional Media pack CD contains the ISO image for HP Insight Control Environment for Linux, HP System Insight Manager, and an integrated installer. Servers must be acquired separately. This Media pack is optional because the latest ISO image and latest updates may be downloaded at no cost from: http://www.hp.com/go/ice-linux (click on Download button).	464422-B21
HP Insight Control Environment for Linux v2.0, No Media, 1-Server license, including One year of 24x7 Technical Support and Updates NOTE: This part number can be used to purchase one (1) license with a single activation key. Customer will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service. One certificate is shipped for each license.	464423-B21

NOTE: For additional License Kits, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/13019_div/13019_div.html

Server Management Stand Alone Software Product - ProLiant Essentials

NOTE: Electronic licensing options are available for select ProLiant Essentials software products. Please see the appropriate ProLiant Essentials QuickSpecs for additional information.

Deploy

ProLiant Essentials Rapid Deployment Pack

ProLiant Essentials Rapid Deployment Pack No Media 1-Server License including 1 year of 24x7 Technical Support and Updates 452151-B21
NOTE: This license allows 1 server to be deployed and managed via RDP. Customer will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support Service
NOTE: For additional License Kits, please see the QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/11053_div/11053_div.html

HP Server Migration Pack - Universal Edition

HP Server Migration Pack - Universal Edition, No Media, Physical / Virtual to ProLiant Single Migration License, including 1 year of 24x7 Technical Support and Updates 460750-B21
NOTE: This license allows 1 physical to ProLiant or virtual to ProLiant migration. Customer will receive a printed license entitlement certificate and documentation via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service.

HP Server Migration Pack - Universal Edition, No Media, Physical / Virtual to Virtual Single Migration License, including 1 year of 24x7 Technical Support and Updates 460753-B21
NOTE: This license allows 1 physical to virtual or virtual to virtual migration. Customer will receive a printed license entitlement certificate and documentation via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service.

HP Server Migration Pack - Universal Edition, No Media, 1-Year Unlimited Migration License, including 1 year of 24x7 Technical Support 460756-B21
NOTE: This license allows unlimited migrations (physical to ProLiant, physical to virtual, virtual to virtual, and virtual to ProLiant) for one year. Customer will receive a printed license entitlement certificate and documentation via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support Service
NOTE: For additional License Kits, please see the QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/12855_div/12855_div.html

Control

Integrated Lights-Out Select Pack

ProLiant Essentials Integrated Lights-Out Select Pack, No Media, 1-Server License 452158-B21
NOTE: For additional License Kits, please see the QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/12362_div/12362_div.html

Integrated Lights-Out Advanced Pack

Integrated Lights-Out Advanced Pack, No Media ,1 Server License 452141-B21
NOTE: For additional License Kits, please see the QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/10861_div/10861_div.html

Optimize

ProLiant Essentials Virtual Machine Management Pack

ProLiant Essentials Virtual Machine Management Pack, No Media, 1-Server License, including 1 year of 24x7 Technical Support and Updates 452153-B21

Options

NOTE: Customer will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service.
NOTE: For additional License Kits, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12328_div/12328_div.html
NOTE: Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to: http://www.hp.com/servers/proliantessentials or the various ProLiant Essentials QuickSpecs for more information.

Processors	AMD Opteron™ 8354 2.20 GHz, Quad-Core Processor (75W) 4P Option Kit	468121-B21
	AMD Opteron™ 8356 2.30 GHz, Quad-Core Processor (75W) 4P Option Kit	468120-B21
Memory (DIMMs)	8 GB REG PC2-5300 (2 x 4 GB) Kit, dual rank	408854-B21
	4 GB PC2-5300 DDR2 (2 x 2 GB) Kit, dual rank	408853-B21
	2 GB PC2-5300 DDR2 (2 x 1 GB) Kit, single rank	408851-B21
Optical Drives	NOTE: Optical drives are ejectable.	
	Slimline CD-RW/DVD-ROM Combo Drive Option Kit	331903-B21
	Slimline DVD-ROM Drive (8X/24X) Option Kit (Servers)	264007-B21
	HP DVD±R/RW 8X Slim	383975-B21
SAS Option Kit	HP DL785 G5 SAS Option Kit	AH267A
	NOTE: The SAS Option Kit enables the second drive cage to support an additional eight SFF SAS hard disk drives, for a total internal support of sixteen SFF SAS hard disk drives.	
Hard Drives	**SFF SAS Hard Disk Drives - Hot Plug**	
	HP 146GB 3G SAS 10K SFF DP HDD	418367-B21
	HP 146GB 3G SAS 10K SFF SP HDD	431958-B21
	HP 72GB 3G SAS 15K SFF DP HDD	418371-B21
	HP 72GB 3G SAS 15K SFF SP HDD	431935-B21
	HP 72GB 3G SAS 10K SFF DP HDD	384842-B21
	HP 72GB 3G SAS 10K SFF SP HDD	375861-B21
	HP 36GB 3G SAS 15K SFF DP HDD	418369-B21
	HP 36GB 3G SAS 15K SFF SP HDD	431933-B21
	NOTE: Please see the QuickSpecs for Technical Specifications such as capacity, height, width, interface, transfer rate, seek time, physical configuration, and operating temperature: http://h18000.www1.hp.com/products/quickspecs/12244_div/12244_div.html (Worldwide)	

Options

Storage Controllers	SAS Controller	
	Smart Array E500 Controller	
	HP Smart Array E500/256MB Controller	435129-B21
	Smart Array P400 Controller	
	HP Smart Array P400/256MB Controller	405132-B21
	HP Smart Array P400/512MB BBWC Controller	411064-B21
	512MB Battery-backed write cache upgrade NOTE: For Smart Array P400 Controller only. NOTE: If you install the 512MB DDR BBWC as an upgrade to a Smart Array P400/256MB Controller, you must also order part 417836-B21 (HP Smart Array P400 24 Inch Battery Cable Kit).	405148-B21
	Battery-backed write cache upgrade NOTE: For Smart Array P400 Controller only. NOTE: If you install the Battery-backed write cache as an upgrade to a Smart Array P400/256MB Controller, you must also order part 417836-B21 (HP Smart Array P400 24 Inch Battery Cable Kit).	383280-B21
	Smart Array P800 Controller	
	HP Smart Array P800/512 BBWC Controller	381513-B21
	NOTE: Please see the following Controller QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/12700_div/12700_div.html (Smart Array E500 Controller) http://h18000.www1.hp.com/products/quickspecs/12400_div/12400_div.html (Smart Array P400 Controller) http://h18000.www1.hp.com/products/quickspecs/12616_div/12616_div.html (Smart Array P800 Controller)	
	SAS HBA	
	HP SC44Ge Host Bus Adapter	416096-B21
	NOTE: Please see the following QuickSpecs for additional information: http://h18004.www1.hp.com/products/quickspecs/12617_div/12617_div.html (SC44Ge HBA)	

Options

Communications	HP NC110T PCI Express Gigabit Server Adapter	434905-B21
	HP NC360T PCI Express Dual Port Gigabit Server Adapter	412648-B21
	HP NC364T PCI Express Quad Port Gigabit Server Adapter NOTE: There is a maximum of five NC364T PCI Express Quad Port Gigabit Server Adapter NICs allowed in this server.	435508-B21
	HP NC373F PCI Express Multifunction Gigabit Server Adapter	394793-B21
	HP NC373T PCI Express Multifunction Gigabit Server Adapter	394791-B21
	HP NC380T PCI Express Dual Port Multifunction Gigabit Server Adapter	394795-B21
	HP NC510C PCIe 10 Gigabit Server Adapter NOTE: A minimum of 1 gigabyte (1 GB) of server memory is required per each NC510C adapter.	414129-B21
	HP NC510F PCIe 10 Gigabit Server Adapter NOTE: A minimum of 1 gigabyte (1 GB) of server memory is required per each NC510F adapter.	414126-B21
Cable Option	HP High Power Graphics Card Cable Option	AH270A
HPC Specific Options	HP IB 4X SDR PCI-e single PORT HCA	431038-B21
	HP IB 4X DDR PCI-e Single PORT HCA	431039-B21
	HP IB 4X DDR PCI-e Dual Port HCA	409376-B21
	HP IB 4X DDR Conn-X PCI-e Dual Port HCA	448397-B21
Redundant Options	HP 1200W 12V Hot plug AC Power Supply NOTE: If you require a local power cord, please check the Power Specifications below for the appropriate country-specific power cord, or consult the Power Cord Matrix: http://www.hp.com/go/powercordmatrix.	437572-B21
Tape Drives	NOTE: For the complete listing of Tape Drive offerings, please see: http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html For recommended tape drive offerings for this ProLiant server see the following:	
	USB Tape Drives	
	HP StorageWorks 1U USB Rack-Mount Kit with one DAT 160 USB Tape Drive	AG703A
	SAS Tape Drives NOTE: For the DL785 G5, HP recommends purchasing the HP SC44Ge HBA (416096-B21) for a dedicated SAS HBA for tape.	
	HP StorageWorks LTO-2 Ultrium 448 SAS External Tape Drive	DW086A
	HP StorageWorks LTO-3 Ultrium 920 SAS External Tape Drive	EH848A
	HP StorageWorks 1U SAS Rack-mount kit with one LTO-4 Ultrium 1760	EH946A
	NOTE: Please refer to the "Tape Drives, Tape Autoloaders & Tape Libraries" table in the Storage section of this document for a list of SAS controllers with tape support.	

Options

SCSI Tape Drives	
NOTE: For the DL785 G5, HP recommends purchasing the HP SC11Xe HBA (412911-B21) for a dedicated SCSI HBA for tape.	
HP StorageWorks 1U SCSI Rack-mount kit with one LTO-2 Ultrium 448 (Carbonite)	DW028B
HP StorageWorks 1U SCSI Rack-mount kit with one LTO-3 Ultrium 920	EH903A
HP StorageWorks 3U SCSI Rack-Mount with 1 LTO-4 Ultrium 1840 Tape Drive	EH926A
NOTE: Please see the HP StorageWorks Ultrium Tape Drive QuickSpecs for additional options such as controllers, media, and other related items: http://h18006.www1.hp.com/products/quickspecs/11739_div/11739_div.html (Worldwide) http://h18006.www1.hp.com/products/quickspecs/12128_div/12128_div.html (Worldwide) For an up-to-date listing of the latest O/S and software support details for HP Ultrium tape drives, please visit: http://www.hp.com/go/connect	
Rack-Mount Tape Drive Enclosures	
HP StorageWorks 1U SCSI Rack-Mount kit NOTE: The 1U Rack-Mount Kit can support up to (2) half-height tape drives and is compatible with multiple Single-Ended and LVD SCSI tape drives including the DAT 40, DAT 72, DAT 160, LTO-1 Ultrium 232, LTO-2 Ultrium 448 and LTO-3 Ultrium 920 tape drives.	A7445B
HP StorageWorks 1U USB Rack-Mount Kit NOTE: The 1U USB Rack-Mount Kit can support up to (2) half-height tape drives and is compatible with the DAT 40 USB, DAT 72 USB and DAT 160 USB tape drives.	A8007A
HP StorageWorks 1U SAS Rack-Mount Kit NOTE: The 1U SAS Rack-Mount Kit can support up to (2) half-height tape drives and is compatible with the DAT 160 SAS, LTO-2 Ultrium 448 SAS, LTO-3 Ultrium 920 SAS and LTO-4 Ultrium 1760 SAS tape drives.	AE459A
HP StorageWorks 3U SCSI Rack-mount Kit NOTE: The 3U SCSI Rack-mount Kit can support up to (2) full-height or (4) half-height tape drives and is compatible with multiple LVD SCSI tape drives including DAT 40, DAT 72, DAT 160, LTO-1 Ultrium 232, LTO-2 Ultrium 448, LTO-3 Ultrium 920, LTO-3 Ultrium 960 and LTO-4 Ultrium 1840 tape drives.	274338-B22
HP StorageWorks 3U SAS Rack-mount Kit NOTE: The 3U Rack-mount Kit can support up to (2) full-height or (4) half-height tape drives and compatible with multiple SAS tape drives including DAT 160 SAS, LTO-2 Ultrium 448 SAS, LTO-3 Ultrium 920 SAS, LTO-4 Ultrium 1760 SAS and LTO-4 Ultrium 1840 SAS tape drives.	AG576A
NOTE: Please see the Rack-Mount Tape Drive Kits QuickSpecs for additional information regarding these kits: http://h18000.www1.hp.com/products/quickspecs/10854_div/10854_div.html (Worldwide)	AG576A

Options

HP D2D Backup System	HP StorageWorks D2D110 Backup System NOTE: 1TB of Disk Storage	EH880A
	HP StorageWorks D2D110 Backup System with Data Protector Express Software Kit NOTE: 1TB of Disk Storage	EH923A
	HP StorageWorks D2D120 Backup System NOTE: 2TB of Disk Storage	EH884A
	HP StorageWorks D2D120 Backup System with Data Protector Express Software Kit NOTE: 2TB of Disk Storage	EH924A
	HP StorageWorks D2D130 Backup System NOTE: 3TB of Disk Storage.	EH950A
	HP StorageWorks D2D130 Backup System with Data Protector Express Software Kit NOTE: 3TB of Disk Storage.	EH951A
	HP StorageWorks D2D130 Backup System with LTO-3 Ultrium 920 SAS Tape Drive NOTE: 3TB of Disk Storage.	EH952A
	NOTE: Please see the HP D2D Backup Systems QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/12651_div/12651_div.html (Worldwide)	
Tape Autoloaders	HP StorageWorks DAT Autoloader	
	HP StorageWorks DAT 72x10 tape autoloader	AE313B
	HP StorageWorks 1/8 Tape Autoloader	
	HP StorageWorks 1/8 G2 LTO-4 Ultrium 1760 SAS Tape Autoloader	AK377A
	HP StorageWorks 1/8 G2 LTO-3 Ultrium 920 Tape Autoloader	AH165A
	HP StorageWorks 1/8 G2 LTO-3 Ultrium 920 SAS Autoloader	AH558A
	HP StorageWorks 1/8 G2 LTO-2 Ultrium 448 Tape Autoloader	AH164A
	HP StorageWorks 1/8 G2 LTO-1 Ultrium 232 Tape Autoloader	AH163A
	HP StorageWorks 1/8 G2 Tape Autoloader Rack Kit NOTE: Required to install the 1/8 G2 Autoloaders in a standard 19-inch rack; includes rails and rackmount instructions	AH166A
	NOTE: Please reference the Tape Autoloader QuickSpecs at: http://www.hp.com/go/automation for additional information needed to create a complete solution.	

Options

Tape Libraries	HP StorageWorks MSL2024 Tape Library	
	HP StorageWorks MSL2024 1 LTO-4 Ultrium 1840 SCSI Drive Library	AJ033A
	HP StorageWorks MSL2024 1 LTO-4 Ultrium 1840 4GB FC Library	AJ034A
	HP StorageWorks MSL2024 1 LTO-4 Ultrium 1760 SAS Drive Library	AK378A
	HP StorageWorks MSL2024 1 LTO-3 Ultrium 960 SCSI Drive Library	AG115A
	HP StorageWorks MSL2024 1 LTO-3 Ultrium 960 4GB FC Library	AG326B
	HP StorageWorks MSL2024 1 LTO-3 Ultrium 920 SAS Drive Library	AH559A
	HP StorageWorks MSL2024 1 LTO-3 Ultrium 920 SCSI Drive Library	AH169A
	HP StorageWorks MSL2024 1 LTO-2 Ultrium 448 SCSI Drive Library	AG116A
	HP StorageWorks MSL4048 Tape Library	
	HP StorageWorks MSL4048 1 LTO-4 Ultrium 1840 SCSI Drive Library	AJ035A
	HP StorageWorks MSL4048 1 LTO-4 Ultrium 1840 4GB FC Library	AJ036A
	HP StorageWorks MSL4048 2 LTO-4 Ultrium 1760 SAS Drive Library	AK380A
	HP StorageWorks MSL4048 1 LTO-3 Ultrium 960 SCSI Drive Library	AG322A
	HP StorageWorks MSL4048 1 LTO-3 Ultrium 960 4GB FC Library	AG324B
	HP StorageWorks MSL4048 1 LTO-3 Ultrium 920 SAS Drive Library	AH560A
	HP StorageWorks MSL4048 1 LTO-3 Ultrium 920 SCSI Drive Library	AH171A
	HP StorageWorks MSL4048 1 LTO-2 Ultrium 448 SCSI Drive Library	AG320A
	NOTE: Please reference the MSL Tape Library QuickSpecs at: http://www.hp.com/go/automation for additional information needed to create a complete solution; reference current compatibility information at: http://www.hp.com/go/ebs.	

High Availability Cluster Options	HP Serviceguard for Linux	
	HP Serviceguard Linux x86 Server License & Media including One Year 24x7 Software Support & Updates	463831-B21
	HP Serviceguard Linux Oracle Single Instance Database Toolkit x86 Cluster License & Media including One Year 24x7 Software Support & Updates	463833-B21
	HP Serviceguard Linux Extension for SAP (SGeSAP/LX) x86 Server License & Media including One Year 24x7 Software Support & Updates	463834-B21
	HP Serviceguard Linux Extended Distance Cluster (XDC) x86 Server License & Media including One Year 24x7 Software Support & Updates	463835-B21
	NOTE: For a detailed list of supported configuration/certification options for HP Serviceguard for Linux please refer to the HP Serviceguard for Linux Certification Matrix at: http://www.hp.com/go/sglx/info NOTE: HP Serviceguard for Linux products running on x86 platforms now include one year of 24 x 7 Software Technical Support and Updates. Please see the Support Information section of the HP Serviceguard for Linux QuickSpecs for details. NOTE: For additional information including a complete list of Product Numbers for HP Serviceguard for Linux, please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11518_div/11518_div.html (Worldwide)	

Options

StorageWorks Options	NOTE: The following is a list of all Fibre Channel Host Bus Adapters for Windows and Linux. For detailed compatibility information please see: http://h18006.www1.hp.com/storage/saninfrastructure/hba.html	
	HP StorageWorks FC2142SR 4Gb PCI-e HBA	A8002A
	HP StorageWorks FC2242SR Dual Channel 4 Gb PCI-e HBA	A8003A
	HP StorageWorks FC1142SR 4Gb PCI-e HBA	AE311A
	HP StorageWorks FC1242SR Dual Channel 4 Gb PCI-e HBA	AE312A
HP StorageWorks Modular Smart Array 50	HP StorageWorks Modular Smart Array 50 Enclosure	364430-B21
	NOTE: Please see the Modular Smart Array 50 QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: http://h18000.www1.hp.com/products/quickspecs/12245_div/12245_div.html (Worldwide)	
Uninterruptible Power Systems – Rack	HP, R1.5kVA UPS, 1U, NA	AF419A
	HP, R1.5kVA UPS, 1U, INTL	AF418A
	HP, R1.5kVA UPS, 1U, JPN/TW	AF421A
	HP R3000 VA UPS, 2U, DTC, INTL	AF414A
	HP R3000 VA UPS, 2U, L5-30, NA	AF422A
	HP R3000 VA UPS, 2U, L6-20, NA	AF423A
	HP R3000 VA UPS, 2U, L6-20, JPN	AF424A
	HP R3000 VA UPS, 2U, L5-30, JPN	AF425A
	HP R5500 VA UPS, INTL	AF416A
	HP R5500 VA UPS, NA/JPN	AF426A
HP Monitored Power Distribution Unit (PDU)	HP Monitored Power Distribution Unit: Full Rack Version	
	HP 17.3 kVA S2324 Monitored PDU - dual input, 3U, 24A (NA/JPN)	AF503A
	HP 8.3 kVA S1324 Monitored PDU - single input, 3U, 24A (NA/JPN)	AF504A
	HP 16.6 kVA S2140 Monitored PDU - dual input, 1U, 40A (NA/JPN)	AF505A
	HP 8.6 S1140 Monitored PDU - single input, 1U, 40A (NA/JPN)	AF506A
	HP 22.1 kVA S2316 Monitored PDU - dual input, 3U, 16A (INTL)	AF507A
	HP 11 kVA S1316 Monitored PDU - single input, 3U, 16A (INTL)	AF508A
	HP 14.7 kVA S2132 Monitored PDU - dual input, 1U, 32A (INTL)	AF509A
	HP 7.3kVA S1132 Monitored PDU - single input, 1U, 32A (INTL)	AF510A
	HP Monitored Power Distribution Unit: Half Rack Version	
	HP 17.3 kVA S348 Monitored PDU- single input, 3Ø, 48A (NA/JPN)	AF916A
	HP 22 kVA S332 Monitored PDU - single input, 3-phase, 32A (INTL)	AF917A
	HP 4.9kVA S124 Monitored PDU - single input, 1U, 24A (NA/JPN)	AF914A
	HP 7.3kVA S132 Monitored PDU - single input, 1U, 32A (INTL)	AF915A

Options

Modular Power Distribution Units 1U/0U (Up to 32 outlets) NOTE: 1U/0U mounting brackets shipped with the unit (optimized for 10000 and 9000 series racks).	HP Modular Power Distribution Units (mPDU), Low Volt Model, 24A (100-127 VAC) (NA, Japan) NOTE: This mPDU (252663-D71) may also be used to connect the low volt model of the UPS R3000 XR.	252663-D71
	HP Modular Power Distribution Units (mPDU), High Volt Model, 24A (200-240 VAC) (NA, Japan)	252663-D72
	HP Modular Power Distribution Units (mPDU), High Volt Model, 32A (200-240 VAC) (Int'l)	252663-B31
	HP Modular Power Distribution Units (mPDU), High Volt Model, 40A (200-240 VAC) (WW) NOTE: This mPDU (252663-B21), 40A model has a hardwired input.	252663-B21
	HP Modular Power Distribution Units (mPDU), High Volt Model, 16A (200-240 VAC) (WW) NOTE: This PDU has a detachable input power cord and allows for adaptability to country specific power requirements. This model may also be used with the high volt UPS R3000 XR. For North America, need to order cable PN 340653-001. NOTE: Please see the following Modular Power Distribution Unit (Zero-U/1U Modular PDUs) QuickSpecs for additional options including shorter jumper cables and country specific power cords: http://h18000.www1.hp.com/products/quickspecs/11041_div/11041_div.html (Worldwide)	252663-B24

USB Options	HP USB 2-Button Optical Scroll Mouse (Carbonite/Silver)	DC172B
	1.44MB External USB Floppy Drive	DC141B
	HP 1GB USB 2.0 Floppy Drive Key	442085-B21
	HP 256MB USB 2.0 Floppy Drive Key	442084-B21

HP Rack 10000 G2 Series (Carbon/Graphite Metallic)	10642 G2 (42U) Rack Cabinet - Pallet	AF001A
	10642 G2 (42U) Rack Cabinet - Shock Pallet	AF002A
	10642 G2 (42U) Rack Cabinet - Crated	AF003A
	10642 G2 (42U) Rack Cabinet, with Extension - Shock Pallet	AF004A
	10636 G2 (36U) Rack Cabinet - Pallet	AF011A
	10636 G2 (36U) Rack Cabinet - Shock Pallet	AF012A
	10636 G2 (36U) Rack Cabinet - Crated	AF013A
	10636 G2 (36U) Rack Cabinet, with Extension - Shock Pallet	AF014A
	10622 G2 (22U) Rack Cabinet - Pallet	AF021A
	10622 G2 (22U) Rack Cabinet - Shock Pallet	AF022A
	10842 G2 (42U) 800mm Wide Rack Cabinet - Pallet	AF041A
	10842 G2 (42U) 800mm Wide Rack Cabinet - Shock Pallet	AF042A
	10647 G2 (47U) Rack Cabinet - Pallet	AF031A
	NOTE: It is mandatory to use a shock pallet when shipping racks with equipment installed.	

Options

NOTE: Please see the Rack 10000 G2 QuickSpecs for Technical Specifications such as height, width, depth, weight, and color: http://h18000.www1.hp.com/products/quickspecs/12402_div/12402_div.html (Worldwide)

NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://www.hp.com/go/rackandpower.

Keyboards and Monitors	TFT7210R Rack Mounted 17" Monitor	348373-B21
	TFT7600 Rackmount Keyboard Monitor US	AG052A
	TFT7600 Rackmount Keyboard Monitor UK	AG053A
	TFT7600 Rackmount Keyboard Monitor GR	AG054A
	TFT7600 Rackmount Keyboard Monitor FR	AG055A
	TFT7600 Rackmount Keyboard Monitor IT	AG056A
	TFT7600 Rackmount Keyboard Monitor SP	AG057A
	TFT7600 Rackmount Keyboard Monitor DEN	AG058A
	TFT7600 Rackmount Keyboard Monitor NOR	AG059A
	TFT7600 Rackmount Keyboard Monitor SE/FI	AG060A
	TFT7600 Rackmount Keyboard Monitor SWI	AG061A
	TFT7600 Rackmount Keyboard Monitor PORT	AG062A
	TFT7600 Rackmount Keyboard Monitor BEL	AG063A
	TFT7600 Rackmount Keyboard Monitor JPN2	AG064A
	TFT7600 Rackmount Keyboard Monitor RUS	AG065A
	TFT7600 Rackmount Keyboard Monitor INTL	AG066A
	1U Rackmount Keyboard with USB, US	AG072A
	1U Rackmount Keyboard with USB, UK	AG073A
	1U Rackmount Keyboard with USB, GR	AG074A
	1U Rackmount Keyboard with USB, FR	AG075A
	1U Rackmount Keyboard with USB, ITL	AG076A
	1U Rackmount Keyboard with USB, SP	AG077A
	1U Rackmount Keyboard with USB, DEN	AG078A
	1U Rackmount Keyboard with USB, NOR	AG079A
	1U Rackmount Keyboard with USB, SE/FI	AG080A
	1U Rackmount Keyboard with USB, SWI	AG081A
	1U Rackmount Keyboard with USB, PORT	AG082A
	1U Rackmount Keyboard with USB, BEL	AG083A
	1U Rackmount Keyboard with USB, JPN2	AG084A
	1U Rackmount Keyboard with USB, RUS	AG085A
	1U Rackmount Keyboard with USB, INTL	AG086A

NOTE: For additional information regarding Rack Options, please see the following URL: http://www.hp.com/go/rackandpower.

Options

HP KVM Switch Options	2x1x16 IP Console Switch with Virtual Media	AF601A
	4x1x16 IP Console Switch with Virtual Media	AF602A
	2x16 Server Console Switch with Virtual Media	AF600A
	PS/2 Virtual Media Interface Adapter, 1 pack NOTE: Requires PS/2 and one USB port on server.	AF604A
	Server Console Switch (KVM), 0 x 1 x 8 port	336044-B21
	Server Console Switch (KVM), 0 x 2 x 16 port	336045-B21
	PS/2 Interface Adapter, 1 pack	262588-B21
	PS/2 Interface Adapter, 8 pack	262587-B21
	USB Interface Adapter, 1 pack	336047-B21
	Serial Interface adapter - 1 Pack with power supply	373035-B21
	NOTE: Cat5e cables are required to connect Interface Adapters to Console Switches. Cat5e cables can be found at the following URL: http://www.hp.com/go/kvm.	
	HP 1x4 Server Switch	AF611A
	PS2 Server Console Cable, 6 ft, 2 pack	AF612A
	USB Server Console Cable, 6 ft, 2 pack	AF613A
	NOTE: For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: http://www.hp.com/go/kvm.	

HP Serial Console Server Options	HP 16 Port Serial Console Server (worldwide)	AF101A
	HP 48 Port Serial Console Server (worldwide)	AF102A
	Serial Adapter, RJ45-DB9 DCE Female, 1 Pack	AF103A
	Serial Adapter, RJ45-DB9 DCE Female, 8 Pack	AF110A
	NOTE: Cat5e cables are required to connect Serial Adapters to Serial Console Servers. Additional Serial Adapters and Cat5e cables can be found at the following URL: http://www.hp.com/go/kvm.	
	NOTE: For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: http://www.hp.com/go/kvm.	

Options

Service and Support Offerings (HP Care Pack Services)	**Hardware Services On-site Service**	
	4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic	UJ783E
	4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	UJ784E
	Hardware Services 6-Hour Call to Repair On-site Service	
	6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	UJ785E
	Installation & Start-up Services	
	Hardware Installation, Electronic	UJ798E
	Installation & Start-Up of a ProLiant server and Microsoft or Linux O/S per the Customer Description and/or Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays, Electronic	UJ799E
	NOTE: For more information, customer/resellers can contact: http://www.hp.com/services/carepack.	

Memory

NOTE: Memory configurations listed do not apply to "Factory Integrated Models."

HP ProLiant DL785 G5 4P Models

Standard Memory

8 GB PC2-5300 Double Data Rate 2 (DDR2) SDRAM (Registered SDRAM) memory running at 667 MHz with Advanced ECC or
16 GB PC2-5300 Double Data Rate 2 (DDR2) SDRAM (Registered SDRAM) memory running at 667 MHz with Advanced ECC

At least one pair of DIMMs must be installed in slots 1A and 2A to operate the server. Observe the following DIMM installation guidelines to add additional memory to the server:

- DIMMs must be installed in pairs.
- DIMM installed on the same memory bank must have the same part number.
- DIMMs installed in different banks can be of different sizes.
- DIMMs must be installed in decreasing capacity with the largest DIMMs installed in the banks furthest away from each processor.
- Each Cell board must have the same quantity of DIMMs.

NOTE: If all four banks on a memory node are populated, the maximum memory clock speed will be 533 MHz. If two or fewer banks on a memory node are populated, the maximum memory clock speed will be 667 MHz.

The following memory options are available from HP:

8 GB REG PC2-5300 (2 x 4 GB) Kit, dual rank	408854-B21
4 GB PC2-5300 DDR2 (2 x 2 GB) Kit, dual rank	408853-B21
2 GB PC2-5300 DDR2 (2 x 1 GB) Kit, single rank	408851-B21

Standard Memory Configuration (2.2GHz model) Total Memory = 8 GB								
	1 (Slot furthest from processor)	2	3	4	5	6	7	8 (Slot closest to processor)
Processor 1 Memory Bus	1 GB	1 GB	Empty	Empty	Empty	Empty	Empty	Empty
Processor 2 Memory Bus	1 GB	1 GB	Empty	Empty	Empty	Empty	Empty	Empty
Processor 3 Memory Bus	Empty	Empty	Empty	Empty	Empty	Empty	Empty	Empty
Processor 4 Memory Bus	Empty	Empty	Empty	Empty	Empty	Empty	Empty	Empty
Processor 5 Memory Bus	Empty	Empty	Empty	Empty	Empty	Empty	Empty	Empty
Processor 6 Memory Bus	Empty	Empty	Empty	Empty	Empty	Empty	Empty	Empty
Processor 7 Memory Bus	1 GB	1 GB	Empty	Empty	Empty	Empty	Empty	Empty
Processor 8 Memory Bus	1 GB	1 GB	Empty	Empty	Empty	Empty	Empty	Empty

Standard Memory Configuration (2.3GHz model) Total Memory = 16 GB								
	1 (Slot furthest from processor)	2	3	4	5	6	7	8 (Slot closest to processor)
Processor 1 Memory Bus	1 GB	1 GB	1 GB	1 GB	Empty	Empty	Empty	Empty
Processor 2 Memory Bus	1 GB	1 GB	1 GB	1 GB	Empty	Empty	Empty	Empty
Processor 3 Memory Bus	Empty	Empty	Empty	Empty	Empty	Empty	Empty	Empty

Memory

Processor 4 Memory Bus	Empty	Empty	Empty	Empty	Empty	Empty	Empty	Empty
Processor 5 Memory Bus	Empty	Empty	Empty	Empty	Empty	Empty	Empty	Empty
Processor 6 Memory Bus	Empty	Empty	Empty	Empty	Empty	Empty	Empty	Empty
Processor 7 Memory Bus	1 GB	1 GB	1 GB	1 GB	Empty	Empty	Empty	Empty
Processor 8 Memory Bus	1 GB	1 GB	1 GB	1 GB	Empty	Empty	Empty	Empty

Examples of other optional configurations include, but are not limited to:

Example #1: Optional Memory Configuration with DIMM mixing
Standard Memory plus Optional Memory and Processors
Total Memory = 68 GB

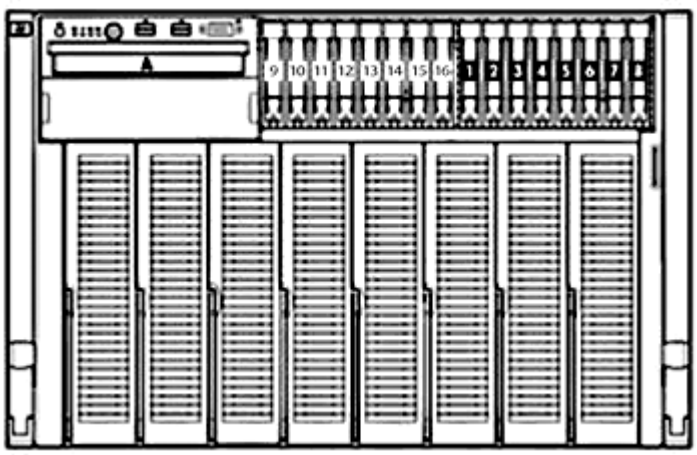
	1	2	3	4	5	6	7	8
Processor 1 Memory Bus	4 GB	4 GB	2 GB	2 GB	1 GB	1 GB	1 GB	1 GB
Processor 2 Memory Bus	4 GB	4 GB	2 GB	2 GB	1 GB	1 GB	1 GB	1 GB
Processor 3 Memory Bus	Empty	Empty	Empty	Empty	Empty	Empty	Empty	Empty
Processor 4 Memory Bus	Empty	Empty	Empty	Empty	Empty	Empty	Empty	Empty
Processor 5 Memory Bus	Empty	Empty	Empty	Empty	Empty	Empty	Empty	Empty
Processor 6 Memory Bus	Empty	Empty	Empty	Empty	Empty	Empty	Empty	Empty
Processor 7 Memory Bus	4 GB	4 GB	4 GB	4 GB	2 GB	2 GB	1 GB	1 GB
Processor 8 Memory Bus	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	1 GB	1 GB

Example #2: Optional Memory Configuration with Partial Bus Population
Standard Memory plus Optional Memory and Processors
Total Memory = 32 GB

	1	2	3	4	5	6	7	8
Processor 1 Memory Bus	1 GB	1 GB	1 GB	1 GB	Empty	Empty	Empty	Empty
Processor 2 Memory Bus	1 GB	1 GB	1 GB	1 GB	Empty	Empty	Empty	Empty
Processor 3 Memory Bus	1 GB	1 GB	1 GB	1 GB	Empty	Empty	Empty	Empty
Processor 4 Memory Bus	1 GB	1 GB	1 GB	1 GB	Empty	Empty	Empty	Empty
Processor 5 Memory Bus	1 GB	1 GB	1 GB	1 GB	Empty	Empty	Empty	Empty
Processor 6 Memory Bus	1 GB	1 GB	1 GB	1 GB	Empty	Empty	Empty	Empty
Processor 7 Memory Bus	1 GB	1 GB	1 GB	1 GB	Empty	Empty	Empty	Empty
Processor 8 Memory Bus	1 GB	1 GB	1 GB	1 GB	Empty	Empty	Empty	Empty

Example #3: Maximum Memory Configuration
Maximum Memory (Standard replaced with Optional Memory)
Total Memory = 256 GB

	1	2	3	4	5	6	7	8
Processor 1 Memory Bus	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB
Processor 2 Memory Bus	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB
Processor 3 Memory Bus	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB
Processor 4 Memory Bus	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB
Processor 5 Memory Bus	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB
Processor 6 Memory Bus	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB
Processor 7 Memory Bus	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB
Processor 8 Memory Bus	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB



A Slimline Media Bay

1-8 Standard 8 SFF hot plug SAS drive bays

9-16 Optional 8 SFF hot plug SAS drive bays

Drive Support

	Quantity Supported	Position Supported	Controller
Ejectable Slimline Drives			
IDE Slimline DVD-ROM Drive (8X/24X)	Up to 1	A	Integrated IDE
IDE Slimline CD-RW/DVD-ROM Combo Drive	Up to 1	A	Integrated IDE
IDE DVD±R/RW 8X Drive	Up to 1	A	Integrated IDE

Hard Drives

SFF SAS - Hot Plug Drives

	Quantity Supported	Position Supported	Controller
146GB 3G SAS 10K SP 72GB 3G SAS 10K SP 72GB 3G SAS 15K SP 36GB 3G SAS 15K SP	Up to 8	1-8	HP Smart Array P400i Controller

SFF SAS - Hot Plug Drives

	Quantity Supported	Position Supported	Controller
146GB 3G SAS 10K SP 72GB 3G SAS 10K SP 72GB 3G SAS 15K SP 36GB 3G SAS 15K SP	Up to 8	9-16	HP Smart Array P400/256MB Controller HP Smart Array P400/512MB BBWC Controller HP Smart Array P800/512 BBWC Controller

Storage

External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
Modular Smart Array 50 Enclosure	2 per connector (supports 1+1 cascading)	External	HP Smart Array P800/512 BBWC Controller

Maximum Storage Capacity - (External Enclosure Attached)

Internal	2.336TB (16 x 146GB SFF SAS Drives)
External	5.840TB (2 MSA50 Enclosures 20 drives per enclosure x 146GB SFF SAS Drives)
Total	8.176TB

Tape Drives, Tape Autoloaders, Tape Libraries and D2D

NOTE: For an up-to-date listing of the latest O/S Support details for each of the Tape Drives listed below, please see the following: http://h18000.www1.hp.com/products/quickspecs/division/10233.html (Worldwide)

NOTE: For an up-to-date listing of the latest O/S Support details for each of the Tape Autoloaders and Tape Libraries listed below, please see the following: http://h18000.www1.hp.com/products/quickspecs/division/10809.html (Worldwide)

NOTE: For complete listing of tape drive offerings see: http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html

NOTE: SAS Tape Drives: Connecting hard drive cage and SAS tape to the same SAS Controller using split cable (supplied with tape drive) deactivates 1 of the hard drive bays. Actual hard drive bay deactivated depends on where split cable plugs into SAS drive connector. Example: 3x SAS cable connector plugged into SAS drive connector (5-8) on the back of the hard drive cage would mean drive bay 8 is deactivated.

	Position Supported	Controller	Controller Part Number
HP StorageWorks SCSI Tape Drives, External LTO-1 Ultrium 232 LTO-2 Ultrium 448 LTO-3 Ultrium 960 LTO-3 Ultrium 920 LTO-4 Ultrium 1840 DAT 40 DAT 72 DAT 160 1U Rack-Mount Kit 3U Rack-Mount Kit	External	HP SC11Xe Host Bus Adapter	412911-B21
HP StorageWorks USB Tape Drives, External DAT 40 USB DAT 72 USB DAT 160 USB 1U Rack-Mount Kit	External	USB 2.0 Port	N/A

HP StorageWorks SAS Tape Drives, External DAT 160 SAS LTO-2 Ultrium 448 SAS LTO-3 Ultrium 920 SAS LTO-4 Ultrium 1760 SAS LTO-4 Ultrium 1840 SAS 1U Rack-Mount Kit 3U Rack-Mount Kit	External	HP SC44Ge Host Bus Adapter	416096-B21
HP StorageWorks SCSI Tape Automation, External DAT 72x10 Autoloader 1/8 G2 Autoloader MSL2024 MSL4048 MSL8096 MSL6000	External	HP SC11Xe Host Bus Adapter	412911-B21
		HP U320e SCSI Host Bus Adapter NOTE: Recommended for MSL tape libraries.	AH627A
HP StorageWorks SAS Tape Automation, External 1/8 G2 Autoloader MSL2024 MSL4048 MSL8096	External	HP SC44Ge Host Bus Adapter NOTE: Please visit: http://www.hp.com/go/connect for details about minimum SAS controller firmware version and SAS cabling requirements.	416096-B21
HP StorageWorks Fibre Tape Automation, External MSL2024 MSL4048 MSL8096 MSL6000	External	Please consult the EBS connectivity matrix at: http://www.hp.com/go/ebs for detailed connectivity information.	N/A
HP StorageWorks D2D Backup Systems D2D110 D2D120 D2D130	External	Embedded Network Controller	N/A

Power Specifications

Part number	437572-B21
Operational Input Voltage Range (Vrms)	90 to 264
Frequency Range (Nominal) (Hz)	46 - 63 Hz

Nominal Input Voltage (Vrms)	100	115	208	220	230	240
Max Rated Output Wattage Rating	800W	900W	1200W	1200W	1200W	1200W
Nominal Input Current (A rms)	9.4A	9.9A	7.8A	7.8A	7.8A	7.8A
Max Rated Input Wattage Rating (Watts)	950W	1075W	1375W	1375W	1375W	1375W
Max. Rated VA (Volt-Amp)	969VA	1100VA	1400VA	1400VA	1400VA	1400VA
Efficiency (%)	86%	87%	89%	89%	89%	89%
Power Factor	0.98		0.98			
Leakage Current (mA)	0.5mA	0.5mA	0.5mA	0.5mA	0.5mA	0.5mA
Max. Inrush Current (A peak)	30A	30A	30A	30A	30A	30A
Max. Inrush Current duration (mS)	5mS					

NOTE: - To review typical system power ratings use the Active Answers Power Calculator which is available via the online tool located at url: http://h30099.www3.hp.com/configurator/powercalcs.asp
To drill down to calculators:

- Click on: "ProLiant Servers"
- Click on the Server of interest. Example: DL785 G5
- Click on: "Power Calculator" link. (You may need to scroll down to see it)
- There are certain Dual-core, lowline, max configurations that are not supported. All highline configurations are supported. Consult the Power Calculator to determine if your lowline configuration is supported.

Standard Rack Model Power Cords / Jumper Cords	Description
Asia Pacific	IEC320-C14 to IEC320-C13 Jumper Cord
Europe	IEC320-C14 to IEC320-C13 Jumper Cord
Japan	JIS C8303 to IEC320-C13 IEC320-C14 to IEC320-C13 Jumper Cord
PRC	IEC320-C14 to IEC320-C13 Jumper Cord
USA	IEC320-C14 to IEC320-C13 Jumper Cord

System Unit	**Dimensions** (H x W x D) (with bezel)	12.04 x 17.32 x 27.4 in (30.58 x 44 x 69.6cm)	
	Weight (approximate)	Maximum (all hard drives, power supplies, and processors installed)	160lb (72 kg)
		Minimum (one hard drive, 2 power supply, and 4 processor modules installed)	147 lb (67 kg)
	Input Requirements (per 3 power supplies non redundant)	Rated Line Voltage	90 - 132 VAC 180 - 264 VAC
		Rated Input Current	24A @ 100 VAC 14A @ 200 VAC
		Rated Input Frequency	47 to 63 Hz
		Rated Input Power	2400W @ 100-120 VAC 2800W @ 200-240 VAC
	BTU Rating	Maximum	8189 BTU/hr @ 100-120 VAC 9554 BTU/hr @ 200-240 VAC
	Power Specifications	To review typical system power ratings use the Power Calculator which is available via the online tool located at URL: http://h30099.www3.hp.com/configurator/calc/Power%20Calculator%20Catalog.xls • Click on the system of interest. Example: DL785 G5 • Follow the instructions of the next screens	
	Power Supply Output (per power supply)	Rated Steady-State Power	800 W (at 100 VAC), 1200 W (at 200 VAC)
		Maximum Peak Power	800 W (at 100 VAC), 1200 W (at 200 VAC)
	System Inlet Temperature	Operating	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F).
		Non-operating	-30° to 60° (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
	Relative Humidity (non-condensing)	Operating	10% to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bult temperature, non-condensing.
		Non-operating	5% to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non condensing.

	Altitude	Operating		3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
		Non-operating		9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min)
	Acoustic Noise	Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).		
		Idle		
		L WAd		7.6 B
		L pAm		58 dBa
		Operating		
		L WAd		7.6 B
		L pAm		58 dBa
Slimline CD-RW/DVD-ROM 24X Combo Drive	Shipping Dimensions	13.88 x 11.38 x 9.25 in (35.26 x 28.91 x 23.50 cm)		
	Shipping Weight	5 lb (2.27 kg)		
	Disk	Applicable Disk	DVD-ROM	
			DVD-R (Read Only)	
			2.6 GB/side DVD-RAM (Read Only)	
			5.2 GB/side DVD-RAM (Read Only)	
			CD-ROM Mode-1 data disc	
			CD-ROM Mode-2 data disc	
			CD Audio disc	
			CD-Extra	
			CD-RW	
			CD-R	
			CD Text	
			PhotoCD	
			CD-I (mode 2)	
			CD-I Ready	
			CD-Bridge	
		Capacity	DVD-ROM	DVD-SL 4.7 GB/side
				DVD-DL 8.5 GB/side
				Double Sided 9.40 GB/side
			DVD-R	3.95 GB/side
			DVD-RAM	2.6 GB/side and 5.2 GB/

		CD-ROM	Mode-1	650 MB (550 MB)
			Mode-2	742 MB (640 MB)
	Block Size	DVD		2,048 bytes
		CD		2,352 (Mode-0)
				2352, 2340, 2336, 2048 bytes (Mode-1)
				2352, 2340, 2336, 2048 bytes (Mode-2)
	Diameter	120 mm, 80 mm (with adapter at vertical mounting mode)		
Loading Mechanism	Tray type			
Interface	EIDE (ATAPI)			
Access Times (typical)	Random	DVD-ROM < 120 ms, CD-ROM < 110 ms		
	Full-Stroke	DVD-ROM < 240 ms, CD-ROM < 160 ms		
Audio Output Level (typical)	Line-out	CD 0.7 Vrms at 47 Kohms Load		
Data Transfer Rate (sustained)	DVD-ROM	Single Layer		10.8 MB/sec. Max.
	DVD-RAM	2.77 MB/sec. Max		
	CD-ROM	7.2 MB/sec. Max.		
Cache Buffer	2 MB			
Spin-up Time (typical)	less than 10 seconds			
MTBF	120,000 Power On Hours (POH)			
Ambient Temperature	Operating	-22° to 140° F (-30° to 60° C)		
Relative Humidity	Operating	10% to 80%		
	Storage/Transportation	5% to 95%		
Dimensions	(HxWxD, maximum)	0.5 x 5.04 x 5.1 in (12.7 x 128 x 129.4 mm)		
Option Kit Contents	DVD-ROM drive with installation guide, warranty card, registration card			

Technical Specifications

Integrated Lights-Out 2 Standard (integrated on system board)	**Architecture**	32-bit PCI-based health and remote management ASIC (Application Specific Integrated Circuit)
	Processor	32-bit RISC processor core running at 66 MHz
	Upgradeability	Option firmware upgradeable via flash ROM
	Video Support	Utilizes the host server's embedded video chip. Supports VGA/SVGA, 640 x 480 (256 to 16.7M colors), 800 x 600 (256 to 16.7M colors), 1024 x 768 (256 to 65K colors), 1280 x 1024 (256 colors)
	Interfaces	One Ethernet network connection (10/100 Mb/s)
	Memory	2-MB Flash ROM
		8-MB SDRAM
	Operating System Support	Microsoft Windows Server 2003 R2 Standard and Enterprise Editions, x64 Standard and Enterprise Editions, and DataCenter Edition
		Red Hat Enterprise Linux
		SUSE Linux Enterprise Server
	Client Browser Support	Microsoft Internet Explorer 6.0 SP1 or later.
		Mozilla Firefox 2.0 or later (on supported Windows and Linux client systems)
		Mozilla Firefox 1.75 or later (for supported Linux client systems)
	iLO 2 Standard Features	Virtual Text Remote Console
		Virtual KVM
		Virtual Power Button Control
		Virtual UID Control
		Power Regulator Control
		Dedicated LAN Connectivity
		Secure access using web browser
		Secure access using Secure Shell (SSH) client
		Serial connectivity
		Automatic IP Configuration via DHCP/DNS/WINS
		Industry Standard 128-bit Secure Sockets Layer (SSL) Security
		IML and iLO2 Event Logging
		Support for up to 12 user accounts with customizable access privileges
	iLO Advanced Features (optional)	Virtual Graphical Remote Console
		Virtual Floppy/USB Key drive
		Virtual CD-ROM drive
		Directory Services Integration
		Processor States Reporting
		Terminal Services Integration

Technical Specifications

Smart Array P400i Controller	Disk Drive and Enclosure Interface	3G SAS (Serial Attached SCSI) 1.5G SATA (Serial Advanced Technology Attachment)	
	SAS Connectors	2 internal (SFF8484) x4 wide port connectors	
	Cache Memory Speed	DDR2-533MHz with 40 or 72-bit wide bus provides up to 4.2 GB/s maximum bandwidth.	
	Server Interface	x8 2.5G PCIe provides 2GB/s maximum bandwidth.	
	SAS Speed	x8 3G SAS provides 2.4GB/s maximum bandwidth.	
	Cache Memory	40-bit 256MB cache (72-bit 512MB module upgrades available); ECC protection, battery-backed, and transportable	
	Logical Drives Supported	Up to 32 logical drives	
	Maximum Logical Drive Capacity	2TB	
	Host Memory Addressing	64-bit, supporting greater than 4GB server memory space	
	RAID Support	RAID 6 with ADG (Advanced Data Guarding) requires Battery Backed Write Cache Upgrade RAID 5 (Distributed Data Guarding) RAID 1, 1+0 (Striping & Mirroring) RAID 0 (Striping)	
Two embedded NC371i Multifunction Gigabit Server Adapters	Network Interface	10/100/1000-T	
	Compatibility	IEEE 802.3 10Base-T	
		IEEE 802.3ab 1000Base-T	
		IEEE 802.3u 100Base-TX	
	Data Transfer Method	PCI Express, four lanes (x4)	
	Network Transfer Rate	10Base-T (Half-Duplex)	10 Mb/s
		10Base-T (Full-Duplex)	20 Mb/s
		100Base-TX (Half-Duplex)	100 Mb/s
		100Base-TX (Full-Duplex)	200 Mb/s
		1000Base-TX (Half and Full-Duplex)	2000 Mb/s
	Connector	RJ-45	
	Cable Support	10Base-T	Categories 3, 4, or 5 UTP; up to 328 ft (100 m)
		10/100/1000 Base-TX	Category 5 UTP up to 328 ft (100 m)

Environment-friendly Products and Approach	End-of-life Management and Recycling	Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: http://www.hp.com/go/green. To recycle your product, please go to: http://www.hp.com/go/green or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/green. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

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For hard drives, 1 GB = 1 billion bytes. Actual formatted capacity is less.